IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Appln. Of

Inventor(s): Sugar et al.   Group Art Unit: 2682

Application No.: 10/695,229   Confirmation No.: 4971

Filing Date: October 28, 2003   Attorney Docket No.: Cognio18US2

Title: SYSTEM AND METHOD FOR ANTENNA DIVERSITY USING JOINT MAXIMAL RATIO COMBINING

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

Pursuant to the duty of disclosure requirements of 37 CFR 1.56, this Information Disclosure Statement is being submitted for entry in the above-identified application. It is being filed before the undersign's knowledge of the mailing of the first Office Action on the merits. Thus, no fee is believed due.

Attached is a form PTO-1449, together with copies of the cited references. The Examiner's consideration of the references is respectfully requested.

Respectfully submitted,
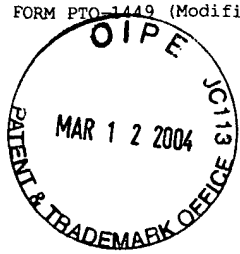
D. Andrew Floam
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(Customer Number 32604)
Date: March 11, 2004

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I, D. Andrew Floam, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450

March 11, 2004

FORM PTO-1449 (Modified)

COGNIO, INC.
101 ORCHARD RIDGE DRIVE, SUITE 350
GAITHERSBURG, MARYLAND 20878

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.: Cognio18US2   GROUP ART UNIT:2682
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FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class/Subclass	Translation (Yes or No)
AA	WO 02/03568	1/10/2002	PCT		
AB	WO 01/45300	6/21/2002	PCT		

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

*Examiner Initial	Author, Title, Date, Pertinent Pages, Etc
BA	Iserte, Antonio Pascual et al., "Pre-and Post-Beamforming in MIMO Channels Applied to HIPERLAN/2 and OFDM," IST Summit 2001 (IST Mobile Communications Summit), September, 2001.
BB	Iserte, Antonio Pascual et al., "Joint Beamforming Strategies in OFDM-MIMO Systems," ICASSP 2002 (IEEE International Conference on Acoustics, Speech and Signal Processing), May, 2002.
BC	Lee, Dennis et al., "Antenna Diversity for an OFDM System in a Fading Channel," Proceeding of IEEE MILCOM 1999, November, 1999, pages 1104-1109.
BD	Jakes, William C., "Microwave Mobile Communications," Copyright 1974, pages 313-320 and 489-498.
BE	Yeh, Y.S., "An Analysis of Adaptive Retransmission Arrays in a Fading Environment," The Bell System Technical Journal, October, 1970, pages 1811-1825.
BF	Morgan, Samuel P., "Interaction of Adaptive Antenna Arrays in an Arbitrary Environment," The Bell System Technical Journal, January, 1965, pages 23-47.
BG	Aziz, Abdul M.K. et al., "Indoor Throughput and Range Improvements using Standard Compliant AP Antenna Diversity in IEEE 802.11a and ETSI HIPERLAN/2," Vehicular Technology Conference, 2002, VTC 2001, October 7-11, 2001, IEEE VTS 54th, Volume 4, pages 2294-2298.
BH	Iserte, Antonio Pascual et al., "Iterative Algorithm for the Estimation of Distributed Sources Localization Parameters," SSP 2001 (11th IEEE Workshop on Statistical Signal Processing), August, 2001.
BI	Vaidyanathan et al., "The Role of Lossless Systems in Modern Digital Signal Processing: A Tutorial," IEEE Transactions on Education, Vol. 32, August 1989, pp. 181-197.
BJ	Raleigh et al., "Spatio-Temporal Coding for Wireless Communication," IEEE Transactions on Communications, Vol 46., No. 3, March 1998, pp. 357-366.
BK	Jungnickel et al., "Performance of a MIMO System with Overlay Pilots," IEEE GlobeCom 2001, pp. 594-598.
BL	BLAST High-Level Overview, Lucent Technologies, July 18, 2000

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BM	Golden et al., "Detection Algorithm and Initial Laboratory Results Using V-BLAST space-time communication architecture," Electronic Letters, January 7, 1999, vol. 35, No. 1.
BN	Golden et al., "V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel," Bell Laboratories, Lucent Technologies, Proc. Int'l Symposium on Advanced Radio Technologies, Builder, CO, September 10, 1998.
BO	Wolniansky et al., "V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel," Proc. ISSSE-98, Pisa, Italy, Sept. 29, 1998.
BP	Chizhik et al., "Keyholes, Correlations, and Capacities of Multielement Transmit and Receiver Antennas," IEEE Transactions on Wireless Communications, Vol. 1, No. 2, April 2002, pp. 361-368.
BQ	Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems," IEEE VTC '2001, September, 2001, pp. 1553-1557.
BR	Stridh et al., "MIMO Channel Capacity on a Measured Indoor Radio Channel at 5.8 GHz," Proc. Of the Asilomar Conf. on Signals, Systems & Computers, Vol. 1, October, 2000, pp. 733-737.
BS	Jungnickel et al., "A MIMO WLAN Based on Linear Channel Inversion," IEE Seminar-MIMO Communication Systems from Concept to Implementation, December, 2001, pp. 20/1-20/6.
BT	Stridh et al., "Spatial Characterization of Indoor Radio Channel Measurements at 5 GHz," SAM '2000, March, 2000, pp. 58-62.
BU	Irner, Ralf et al., "MISO Concepts for Frequency-Selective Channels," 2002 International Zurich Seminar on Broadband Communications Access, February 19-21, 2002.
BV	Choi, Ruly Lai-U et al., "MISO CDMA Transmission with Simplified Receiver for Wireless Communication Handsets," IEEE Transactions on Communications, Vol. 49, No. 5, May, 2002.
BW	Meyer-Ottens, Sven et al., "Downlink Beamforming for W-CDMA Using Feedback and Interference Estimate," March 9, 2001.
BX	Brunner, Christopher et al., "Downlink Beamforming for WCDMA Based on Uplink Channel Parameters," Proc. EPMCC 1999, pages 375-380, March 1999.
BY	Yang, Jian et al., "On Joint Transmitter and Receive Optimization for Multiple-Input-Multiple-Output (MIMO) Transmission Systems," IEEE Transactions on Communications, Vol. 42, No. 12, December, 1994.
BZ	Ivrlac, Michel et al., "On Channel Capacity of Correlated MIMO Channels," ITG Fokusprojekt: Mobilkommunikation "Systeme mit intelligenten Antennen", Ilmenau, 2001.
CA	BABLAN ET AL., "Optimum Diversity Combining and Equalization in Digital Data Transmission with Applications to Cellular Mobile Radio-PartII: Numerical Results", May 1992, IEEE Transactions on Communications, Vol. 30, No. 5, Pgs. 895-907
CB	CHUAH ET AL., "Capacity of Multi-Antenna Array Systems in Indoor Wireless Environment", November 1998, IEEE Globecom
CD	WALLACE ET AL., "Experimental Characterization of the MIMO Wireless Channel: Data Acquisition and Analysis", February 27, 2002, Department of Electrical and Computer Engineering, Brigham Young University

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	CE	LOVE ET AL., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems", November 2002, Proceedings of IEEE Globecom, pgs. 1124-1128.
	CE	Lucent Technologies, "Lucent Technologies' Chips Poised to Bring "BLAST" Multiple Input/Multiple Output Technology to Laptops, PDAs and Other Mobile Devices," October 16, 2002, lucent.com.
	CE	"Lucent's "BLAST" chips to take off in wireless market", October 16, 2002, Semiconductor Business News.
	CE	HEATH ET AL., "A Simple Scheme for Transmit Diversity Using Partial Channel Feedback," 1998, IEEE.

EXAMINER   DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s)